SENATOR MIKE GABBARD

20TH DISTRICT

KAPOLEI, MAKAKILO,
AND PORTIONS OF EWA, KALAELOA
& WAIPAHU

The Senate

STATE CAPITOL
HONOLULU, HAWAII 96813

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AGRICULTURE & ENVIRONMENT

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October 10, 2019

Mr. Omer Shalev
EPA Red Hill Project Coordinator
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Ms. Roxanne Kwan
Solid and Hazardous Waste Branch
State of Hawaii
Department of Health
2827 Waimano Home Road
Pearl City, Hawaii 96782

Dear Mr. Shalev and Ms. Kwan,

Subject: Red Hill Bulk Fuel Storage Facility Administrative Order on Consent Tank Upgrade Alternatives and Release Detection Decision Document, September 2019 NAVFAC Hawai'i

Aloha. Mahalo for the opportunity to provide comments to the Navy's Red Hill Fuel Facility Tank Upgrade Alternative (TUA) decision document, which became available on September 19, 2019. This document was developed by the Navy as required by the Red Hill Bulk Fuel Storage Facility (Red Hill) Administrative Order on Consent (AOC) Statement of Work (SOW) Section 3.

According to the document, the Navy's TUA decision is to retain the existing single-walled tanks and current practices (TUA Option 1A), while implementing certain improvements, including "double-wall equivalency" or removal of fuel in the 2045 timeframe and determining the feasibility for the potential construction of a water treatment plant or equivalent engineering controls. Other improvements the Navy cites include among others installing permanent leak detection equipment, conduct soil vapor monitoring, apply epoxy coating to the tank lower domes, install eight additional monitoring wells and conduct a pilot project to consider fully coating tank barrels.

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The Navy's decision to include "double-wall equivalency" or removal of fuel in the 2045 timeframe lacks clarity in whether or not certain component upgrades will be selected or completed by 2045. The determination as to "the feasibility for the potential construction of a water treatment plant" is also inconclusive as whether the work will be performed at all. This kind of ambiguity is disconcerting and inappropriate in a decision of such significance to the long-term protection of our groundwater aquifer.

The Navy describes "double wall equivalency" as its current work with enhanced leak detection, tank tightness testing, groundwater monitoring, soil vapor monitoring, and measuring the height of the fuel in each tank as layers of protection working together to "provide redundant elements of detection and capture, equivalent to typical provisions of a 'double wall' solution." The Navy would also use a water treatment plant, if constructed, to create a "capture zone" around the Red Hill tank facility to prevent the spread of contamination to drinking water sources.

Leak detection, tank tightness testing, and soil vapor monitoring merely detect and/or measure what is already released to the environment. These activities on a single wall tank is not the same as a tank within a tank secondary containment. The Navy's "double wall equivalency" is also relying on a water treatment plant that currently does not exist and that the Navy has not yet committed to constructing nor proven that it works. This is not the same as keeping the fuel in the tank and preventing it from entering the environment. Such reliance on a potential water treatment plant assumes the plant can treat for any amount of fuel released.

The Red Hill AOC requires the Navy to identify and evaluate tank upgrade options and select a TUA "to prevent releases into the environment" (AOC SOW § 3). In a letter to the Navy in August 2019, the United States Environmental Protection Agency and Hawai'i Department of Health made clear that the TUA decision selected must also "compare the relative environmental performance of each TUA alternative" and "demonstrate to the Regulatory Agencies' satisfaction that groundwater and drinking water resources will be protected". Hawai'i Revised Statutes (HRS) § 342L-32(b)(1) also expressly provides that underground (fuel) storage tank (UST) systems "shall be ... upgraded ... and operated to prevent releases ... for the operational life of the tank or tank system."

The Navy's interpretation of existing data and analyses are not conservative, often unsupported, and should be rejected. Laboratory tests of steel liner samples collected from Tank 14 show rusting (that leads to through-wall holes) is taking place on the side of the liner that cannot be inspected or maintained. Coating the interior surface of a tank does not stop corrosion from occurring on the back side of the liner. The Navy's destructive testing report confirms the Navy's non-destructive evaluation (NDE) method's ability to detect areas of a tank that need repair is unreliable 50% of the time and both over and under-estimates the

condition of the liner. A risk and vulnerability assessment on the Red Hill tank facility performed by the Navy's consultant show an annual probability of a sudden release of fuel between 1,000 and 30,000 gallons to be greater than 27%. This study also reports that chronic, undetected releases (that the Navy currently cannot measure) of 5,803 gallons per year (facility-wide) can be expected. Further, the Navy's current groundwater model has not yet been approved by the regulatory agencies. To date this model is unable to reproduce water levels measured in the field and incorporates subsurface geological features that have yet to be field verified.

On April 9, 2015, my Senate colleagues and I sent a letter to Senator Brian Schatz expressing our concerns with the Red Hill tank facility and its threat to our irreplaceable drinking water supply. Although the Red Hill AOC was still being developed at the time, our letter pointed out that petroleum contaminants continue to be detected and "other studies find the existing steel tanks wearing from corrosion and document the facility's mounting age and risks of a large catastrophic fuel release." We also noted that data suggest that "existing tank maintenance and modernization approaches are not keeping pace with controlling petroleum detections in the groundwater." The data and tests collected since the AOC was signed and described above have affirmed the concerns we expressed in April 2015.

The Navy has made a TUA selection decision that I strongly object to and cannot support. The Navy's position that the considerable risks associated with storing nearly 200 million gallons of fuel 100-feet above our sole-source aquifer is sufficiently mitigated by simply continuing with the status quo is a decision that the regulatory agencies should not accept. If tank within a tank secondary containment is not feasible, then the fuel should be relocated away from the aquifer.

Please let me know if you have any questions or need additional information related to this letter.

Me ke aloha pumehana,

Mike Gabbard

Senator Mike Gabbard

Cc: Dr. Bruce Anderson, Director
State of Hawaii Department of Health

Mr. Ernest Y.W. Lau, Manager and Chief Engineer
Honolulu Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96813

Mr. Steve Linder
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Enclosure

MG/rr
LR-0832

The Senate

STATE CAPITOL
HONOLULU, HAWAII 96813

April 9, 2015

The Honorable Brian Schatz
United States Senate
Prince Kuhio Federal Building
300 Ala Moana Blvd., Room 7-212
Honolulu, HI 96850

Dear Senator Schatz:

The Navy's Red Hill Bulk Fuel Facility contains 187 million gallons of fuel located 100 feet above a State-designated drinking water aquifer. This aquifer supports the Board of Water Supply's Halawa Shaft and Moanalua Wells which together supply over 25% of the drinking water delivered to metropolitan Honolulu. It also provides 20% of the drinking water for Joint Base Pearl Harbor – Hickam through the nearby Red Hill Shaft water source.

Tests conducted by the Navy since 2005 continue to show the presence of petroleum contaminants in the groundwater underneath Red Hill at levels that in one case has exceeded Hawaii State Department of Health (DOH) environmental action limits for nine years. We also understand the Navy has done past studies evaluating the installation of advanced leak detection and supplemental containment for the large Red Hill tanks. However, none has been implemented. Meanwhile, petroleum contaminants continue to be detected. Other studies find the existing steel tanks wearing from corrosion, and document the facility's mounting age and risks of a large catastrophic fuel release.

The detection of fuel contaminants under Red Hill means the contaminants are already dissolved in the water and precludes any assertions that a sub-surface plume of intact fuel (also called free product) needs to be present before action is taken. More significantly, the data suggest that existing tank maintenance and modernization approaches are not keeping pace with controlling petroleum detections in the groundwater. Tests done on a groundwater sample collected shortly after the January 2014 leak detected a large concentration of petroleum hydrocarbons. This data indicate a correlation and the need for additional protective measures and tank integrity improvements to reinforce the facility to safeguard our drinking water aquifer.

According to the United States Environmental Protection Agency (EPA), the Red Hill fuel tanks are field-constructed tanks (FCTs) that are very large and pose a substantial threat to human health and the environment (Federal Register, Vol. 76, No. 223, p. 71732). For this reason, EPA proposed changes in 2011 to *Title 40 Code of Federal Regulation (Parts 280 and 281)* that will regulate field-constructed underground storage tanks and cancel the present deferral of FCTs from the rules. The change will provide the regulatory standing to require Red Hill, a

70-year old corroding facility, to install improvements and initiate the first steps to abate contamination underneath the facility that may have already spread beyond its boundaries. The Navy's position that these contamination levels do not exceed safe drinking standards overlooks the fact that contaminants are present in a ground water aquifer that cannot be replaced and that we depend on for our drinking water. We understand EPA's proposed changes to 40 CFR Parts 280 and 281 are presently being reviewed by the Office of Management and Budget (OMB).

Following the January 13, 2014 leak of fuel from Tank #5 at Red Hill, EPA, in partnership with DOH, has been negotiating an *Administrative Order on Consent (AOC)* with the Navy and the Defense Logistics Agency (DLA). The purpose of the AOC is to provide an enforceable agreement to address the potential threat to Oahu's groundwater resources posed by the Facility by directing a number of follow up actions for implementation by the Navy and DLA in response to the leak. While the AOC intends to contain meaningful actions, the contents are still fundamentally being negotiated. The announced timetable for delivery of the draft AOC for public comment has also changed a number of times from summer 2014 to November 2014 to March 2015 to April 2015, to May 2015 and now August 2015. Such delays do not exhibit a commitment to mitigate the situation and protect our groundwater supplies. The protection of our drinking water cannot be assured by action steps that are negotiated rather than mandated by official rules.

We have grave concerns about Red Hill, its threat to our irreplaceable drinking water supply, the quality of the actions taken in response to the January 2014 leak and the lack of progress made to date. We ask for your commitment and support to aggressively mitigate the situation and fortify the Red Hill tanks to protect our environment and drinking water. Therefore, we request your support of the following:

1. Immediate action by the Navy to fortify containment of the fuel in the 20 tanks at Red Hill and clean-up of the existing petroleum contamination under the facility. The cost of losing a major underground source of drinking water and its impact on our community far outweighs the cost to fortify the tanks.

2. Commit to the passage of EPA's proposed changes to *Title 40 Code of Federal Regulation (Parts 280 and 281)* and request to OMB to approve the changes.

We appreciate your immediate attention to our concerns and look forward to working with you on resolving this serious issue.

Respectfully,

Senator Donna Mercado Kim
Senate President
District 14

Senator Mike Gabbard
Chair, Committee on Energy & Environment
District 20

Senator Josh Green
Chair, Committee on Health
District 3

Senator Breene Harimoto
Vice Chair, Committee on Transportation
District 12

Senator Glenn Wakai
Chair, Committee on Economic Development
& Technology
District 15

Senator Suzanne Chun Oakland
Chair, Committee on Human Services & Housing
District 13